

Development of earth science education program in museum in which it aimed at improvement of natural history literacy

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<http://nh.kanagawa-museum.jp/index.html>

Understanding to nature can be deepened more by promoting the natural history literacy and improving. The promotion and the improvement of the natural history literacy can be called an important problem in the learning activity of natural history museums.

We keep acting aiming at the development of the learning program under which the natural history literacy and individuality and the feature of regional museums are assumed to be a base because -Everyone and anytime and anywhere- museum can be used, and nature can be understood. As for the practice of such an activity, there is a possibility of ending satisfactorily, too and the collaboration of volunteers and teachers is effective only curators.

About 40 people are acting on earth science volunteers in the Kanagawa Prefectural Museum of Natural History (KPMNH). Their activity purpose exists to other people the interest of aiming at, and theirself experience and of the improvement of the natural history literacy satisfying my intellectual curiosity by the collaboration with curators. In the activity such as surveillance studies and collecting datas and the arrangement keeping, the outdoors investigation and collecting datas are done in various places aiming at the construction of the data base of the rock and the volcanic ash outside the Kanagawa prefecture. In the outcrop observation, they can acquire the observation method and knowledge in the outdoors. Moreover, rock thin sections making of the collected rock sample and washing volcanic ashes, and have acquired earth science basic knowledge in the indoor work.

The connection of the museum is requested schools as there is a slogan of a learned uniting for erudition more than before. The demand of the system of support to the academic training in the lending of not only the exhibition visit but also the class, in-service training of teachers, and material for the delivery course and the teaching material etc. for maintenance has increased. Especially, there are a lot of training that uses the thing including the outdoors and demands of guidance in the earth science field where the understanding of a nature-views guess in the outdoor and spatial concepts are necessary. The person who has not finished earth science is as the circumstances, and confidence is in the teaching material guidance because of few and not popular also have various restrictions the experience of outdoors observations. For the problem such as understanding shortage to the academic training like the number of art and science, time, the place, guidelines, and the curriculum, etc. limited as a museum to exist, and to solve these problems, the collaboration is needed. We have collaborated with some teacheres of elementary schools, junior high schools and high schools. Exsample for, instructional planning of how to observe how to distinguish the stone and familiar outcrops, and study to which children voluntarily solved the examination problem was tried. It cooperated in rock thin sections making where geographical features and geological features around the school were made in study and making the strip-ping off specimen of the stratum in the school. As for the examination of the method that can be done at their schools even if not coming to museums, student's achievement feeling is greatly different. Thinking from the tool leads to not only earth science but also various developments. Doing self ideas, and doing for self leads to the promotion of the natural history literacy as much as possible. In training to the teacher, it was considered to be able to attempt the improvement of teacher's natural history literacy.

Only the above-mentioned collaboration is not effective for volunteers and teachers, and the learning effect by the collaboration is verified for curators, and being possible to evaluate it are precious lessons.